

CASE REPORT

Erythematous Rash as a Feature of COVID-19: A Case Report of an Upcoming Entity

Ananda V Cassinadane¹, Aravindan Thiruvallavan²

ABSTRACT

Aim and objective: The sole purpose of this case report is to highlight the relatively rare dermatological manifestations of COVID-19 and their correlation that would aid in early diagnosis and management of the same.

Background: Many new manifestations of SARS-CoV-2 are being observed as days progress. This case report focuses on the cutaneous implications of COVID-19 that may aid physicians in the early identification of COVID-19 cases.

Case description: A 24-year-old Indian male patient with a sedentary lifestyle, developed mild dizziness which progressed to fever, followed by severe myalgia. He got himself admitted in a tertiary care hospital, since he tested positive for COVID-19 and was discharged on day 7 with proper advice. On day 8, he developed mild itchy erythematous papular rashes involving elbow flexures, trunk, and palms lasting for 2 weeks.

Conclusion: Though uncommon, this particular pattern of erythematous rashes was found to be a prominent feature in this patient's case. Emphasizing on the cutaneous involvement in COVID-19 infected patients, which in some cases, can be an early sign and can aid in its early diagnosis.

Clinical significance: The significance of this particular case report lies in the fact that with new evolving strains of SARS-CoV-2, these skin-related minor symptoms can help in effective strategic control of the infection, if detected at the right time.

Keywords: Aid for diagnosis, Erythematous rashes, SARS-CoV-2, Skin manifestations.

SBV Journal of Basic, Clinical and Applied Health Science (2021): 10.5005/jp-journals-10082-03104

BACKGROUND

The origin of the deadly novel coronavirus dates back to November 2019, in China, which was then declared as a pandemic by WHO on March 11, 2020. Apart from being a threat to health, it also posed a potential danger in the day-to-day economy of billions of people, necessitating strict lockdown regulations globally.

Ranging from a mild flu-like illness to respiratory distress, millions of people fell prey to this spectrum. The common symptom being fever; others include cough, fatigue, myalgia, shortness of breath, sore throat, headache, gastrointestinal symptoms, olfactory, and taste impairments. There are ongoing studies on minor symptoms like those related to skin. With respect to skin, rashes being a possible sign of COVID-19 were first unveiled by Recalcati et al.¹ On exploring the cutaneous rashes associated with COVID-19 positive cases, it was even found to be the initial feature as explained by Hunt and Koziatek.² Studies have proposed a variety of cutaneous presentations comprising of (a) morbilliform (b) urticarial (c) perineum like (d) macular erythema (e) vesicular (f) papular, and (g) retiform purpura.³ Many combinations of these mentioned lesions have existed in cases infected with COVID-19.

CASE DESCRIPTION

Patient is a 24-year-old Caucasoid male belonging to upper socioeconomic status. He was a healthcare worker, previously working in a Government setup in the Southern part of India where there was an upsurge in COVID-19 affected cases from June to September 2020. The patient, at the time of presentation, was unemployed and in a sedentary lifestyle with a BMI of 23.

On August 20, 2020, the patient felt dizziness followed by fever. Though there were no other complaints, he got tested for COVID-19. Reverse transcription polymerase chain reaction

¹⁻²Sri Venkateshwaraa Medical College Hospital & Research Centre, Puducherry, India

Corresponding Author: Ananda V Cassinadane, Sri Venkateshwaraa College of Paramedical Sciences, Puducherry, India, Phone: +91 08680892031, e-mail: camvayaravel@gmail.com

How to cite this article: Cassinadane AV, Thiruvallavan A. Erythematous Rash as a Feature of COVID-19: A Case Report of an Upcoming Entity. *J Basic Clin Appl Health Sci* 2021;4(1):18–19.

Source of support: Nil

Conflict of interest: None

proved to be positive following which he got self-admitted in a tertiary care hospital on August 24, 2020. All he was on were azithromycin 500 mg tablet once daily, Zincovit tablet twice daily, and Paracetamol 650 mg tablet (as fever subsided on the day of admission itself), and a healthy protein-rich diet.

On examination, his vitals were stable except for tachycardia at a range of 110 beats/minute. Temperature of 98°F and blood pressure of 120/78 mm Hg were observed. Other symptoms like myalgia, sore throat, and occasional hiccups improved within a week together with daily maintenance of SpO₂ above 97%.

With requisition from the patient and under obligation to maintain self-isolation, he was discharged on August 31, 2020. The very next day of going home, he noticed localized erythematous pinpoint rashes over his left elbow flexures with mild itching. Since the size was small, the patient ignored the lesion. A day after similar rashes were observed on the right elbow flexure. It took just 2 days for the lesions to appear all over the trunk with predominance below the axillae accompanied by excessive dryness. Only after the lesions started to appear over his palms, he reported it all to the

duty physician over the phone as sudden onset, rapidly progressing red lesions. This figure signifies the sequential order and remission of symptoms (Fig. 1).

These rashes caused significant stress to the patient adding up to the already existing isolation pressure. So the patient was not willing to report in person at once. He reported after a week and by then only some rashes were present while others subsided.

On examination, there were maculopapular diffuse erythematous rashes under the right axillary region associated with mild pruritus. There was neither local tenderness nor warmth. No bleeding site/ulceration was seen. Other lesions were almost in an indistinct healing form with mild scaling (Fig. 2).

My patient had no previous similar complaints, no history of allergy to any of the known agents/drugs. He is nondiabetic, nonhypertensive, and free from autoimmune conditions, so is his family. It should also be noted that the patient had no exposure to alcohol, tobacco, or any substance of abuse.

DISCUSSION

Here, we show case a relatively rare presentation of COVID-19 and tried to rule out other possible causes for skin lesions. A known cause was fixed drug eruptions as they commonly result in a similar pattern. But lack of history of drug-related lesions in the past reduced our concern towards it. A thorough investigation of the patient and his family members revealed neither pre-existing autoimmune conditions nor atopy.

The stress and anxiety underwent by the patient would have caused the itch but it was the rash that preceded the stress making the above prediction unlikely. Considering scabies, though itch was present, it was neither more in the night nor did the family members had similar complaints thus ruling out the mite. All these along with some proposed hypotheses like lymphocytic vasculitis, small vessel thrombosis as stated in the histological study by Gianotti et al.⁴ narrowed down our suspicion towards the savaging SARS-CoV-2 as a potential cause.

However, proper investigations pertaining to skin-like biopsy could not be done due to noncooperation from the patient and lockdown situation. This is entirely based on critical clinical observation of the full course of the patient.

As a general practitioner, this correlation stirred some curiosity to look out for similar cases, where some of them had similar lesions, sites, and some with varied presentations.⁵ In many of these cases, the skin happens to be the initial cue that precedes the respiratory symptom making it a pivotal reason to study.⁶ Though this kind of cutaneous involvement in COVID-19 patients was rarely reported in India, in some countries, it was misdiagnosed as dengue.⁷

CONCLUSION

This case observation led to the point that like many other viral infections leading to exanthem, the SARS-CoV-2 can also lead to a similar consequence. Encompassing a varied spectrum of skin lesions, they are never to be overlooked as cutaneous signs can help in early detection and timely isolation of cases by general practitioners who mostly encounter these cases first and thereby cutting down the spread of this cruel agent with a crown.

CLINICAL SIGNIFICANCE

In spite of being a minor symptom in many cases, these skin features have served some major purpose in several cases in diagnosis and containment of cases. In near future, this can impact the way of approach toward COVID-19 patients who present also

Symptoms	Week 1	Week 2	Week 3	Week 4
Fever	■			
Myalgia	■	■		
Sore throat	■			
Skin rashes		■	■	■
Fatigue	■	■	■	■

Fig. 1: Sequential order of origin and remission of the symptoms



Fig. 2: Maculopapular rashes under right axilla

with cutaneous lesions, thus creating enough awareness needed especially among the general practitioners.

ORCID

Ananda V Cassinadane <https://orcid.org/0000-0002-2103-8417>

Aravindan Thiruvallavan <https://orcid.org/0000-0003-1861-6236>

REFERENCES

- Recalcati S. Cutaneous manifestations in COVID-19: a first perspective. *JEurAcadDermatolVenereol*2020:e212–e213. DOI: 10.1111/jdv.16387.
- Hunt M, Koziatek C. A case of COVID-19 pneumonia in a young male with full body rash as a presenting symptom. *ClinPract Cases EmergMed*2020;4(2):219–221. DOI: 10.5811/cpcem.2020.3.47349.
- Freeman EE, McMahon DE, Lipoff JB, Rosenbach M, Kovarik C, Desai SR, et al. The spectrum of COVID-19-associated dermatologic manifestations: an international registry of 716 patients from 31 countries. *J Am AcadDermatol*2020;83(4):1–5. DOI: 10.1016/j.jaad.2020.06.1016.
- Gianotti R, Zerbi P, Dodiuk-Gad RP. Clinical and histopathological study of skin dermatoses in patients affected by COVID-19 infection in the Northern part of Italy. *J DermatolSci* 2020;98(2):141–143. DOI: 10.1016/j.jdermsci.2020.04.007.
- Jimenez-Cauhe J, Ortega-Quijano D, Prieto-Barrios M, Moreno-Arrones OM, Fernandez-Nieto D. Reply to "COVID-19 can present with a rash and be mistaken for Dengue": petechial rash in a patient with COVID-19 infection. *J Am AcadDermatol* 2020;83(2):e141–e142. DOI: 10.1016/j.jaad.2020.04.016.
- López DF, Sánchez-Velázquez A, de Frutos JO. Maculopapular rash as initial manifestation of SRAS-coronavirus-2 infection. *Med Clin*2020;155(2):92. DOI: 10.1016/j.medcli.2020.04.003.
- Joob B, Wiwanitkit V. COVID-19 can present with a rash and be mistaken for dengue. *JAmAcadDermatol*2020;82(5):e177. DOI: 10.1016/j.jaad.2020.03.036.